REPORT

1. **Number of Clusters Formed**:

- After evaluating the **Davies-Bouldin Index (DB Index)** and **Inertia**, you should select the optimal number of clusters. For instance, if the **DB Index** is lowest at 5 clusters, you should report that.

2. **DB Index Value**:
   - The **DB Index** should be reported for the optimal number of clusters. A lower DB Index indicates better clustering.
3. **Silhouette Score**:
   - The **Silhouette Score** can be used to check how distinct the clusters are. A score close to +1 indicates well-separated clusters, while a score close to 0 indicates overlapping clusters.
4. **Visual Representation of Clusters**:
   - Provide a **2D scatter plot** showing how the customers are grouped into different clusters. This visualization will help stakeholders easily understand the customer segments.

Evaluation Criteria

- **Clustering Logic**: The choice of clustering algorithm and the number of clusters should make sense for the given data.
- **Metrics**: The **DB Index** should be minimized, and the **Silhouette Score** should be considered to ensure meaningful segmentation.
- **Visualization**: Clear and informative visualizations of clusters using PCA.